【CLAIMS】

【Claim 1】

A phosphor,

wherein a first phosphor having a chemical formula of $Sr_{4-x}Mg_yBa_zSi_2O_8:Eu_x^{2+}$ ($0 < x < 1$, $0 \leq y \leq 1$, $0 \leq z \leq 1$) and a second phosphor having a chemical formula of $Sr_{3-x}SiO_5:Eu^{2+}_x$ ($0 < x \leq 1$) are used with mixed in a fixed ratio.

【Claim 2】

The phosphor of claim 1, wherein the first phosphor is excited by light having a main peak in a range of 400 to 480nm and has a light emitting main peak in a range of 500 to 600nm.

【Claim 3】

The phosphor of claim 1, wherein the second phosphor is excited by light having a main peak in a range of 400 to 480nm and has a light emitting main peak in a range of 550 to 600nm.

【Claim 4】

The phosphor of claim 1, wherein a ratio of the first phosphor and the second phosphor is in a range of 9.9 : 0.1 to 5.0 : 5.0.

【Claim 5】

The phosphor of claim 1, wherein an average size of a particle of the first phosphor and the second phosphor is 20㎛ or less.

【Claim 6】

The phosphor of claim 1, wherein an average size of a particle of the first phosphor and the second phosphor is in a range of 5 to 15㎛.

【Claim 7】

The phosphor of claim 1, wherein excitation light of the phosphor has a main peak in in a range of 400 to 480nm.

【Claim 8】

The phosphor of claim 1, wherein light exciting the phosphor and light excited by the phosphor are composed and emit white light.

【Claim 9】

A light emitting device comprising:

a light source;

a substrate supporting the light source;

a light transmitting member provided in at least one part around the light source; and

a phosphor which is mixed in the light transmitting member and in which a first phosphor having a chemical formula of $Sr_{4-x}Mg_yBa_zSi_2O_8:Eu_x^{2+}$ ($0 < x < 1$, $0 \le y \le 1$, $0 \le z \le 1$) and a second phosphor having a chemical formula of $Sr_{3-x}SiO_5:Eu^{2+}_x$ ($0 < x \le 1$) are mixed in a fixed ratio.

【Claim 10】

The light emitting device of claim 9, wherein when the light emitting device is used in a top view type, a ratio of the first phosphor and the second phosphor is in a range of 9.7 : 0.3 to 8.5 : 1.5.

【Claim 11】

The light emitting device of claim 10, wherein a content of the phosphor to the light transmitting member is in a range of 10 to 30 wt%.

【Claim 12】

The light emitting device of claim 9, wherein when the light emitting device is used in a side view type, a ratio of the first phosphor and the second phosphor is in a range of 9.5 : 0.5 to 8.0 : 2.0.

【Claim 13】

The light emitting device of claim 12, wherein a content of the phosphor to the light transmitting member is in a range of 5 to 20wt%.

【Claim 14】

The light emitting device of claim 9, wherein when the light emitting device is used in white backlight, a mixed ratio of the first phosphor and the second phosphor is in a range of 9.7 : 0.3 to 8.5 : 1.5.

【Claim 15】

The light emitting device of claim 14, wherein a content of the phosphor to the light transmitting member is in a range of 20 to 50 wt%.

【Claim 16】

The light emitting device of claim 9, wherein when the light emitting device is used in bluish white color backlight, the first phosphor and the second phosphor are mixed in a ratio of 9.7 : 0.3 to 8.5 : 1.5.

【Claim 17】

The light emitting device of claim 16, wherein a content of the phosphor to the light transmitting member is in a range of 10 to 40 wt%.

【Claim 18】

The light emitting device of claim 9, wherein the light transmitting member is molded as a light transmitting resin material.

【Claim 19】

The light emitting device of claim 18, wherein the light transmitting resin member is a silicone resin or an epoxy resin.

【Claim 20】

The light emitting device of claim 9, wherein white color light is emitted after passing through the phosphor layer.

【Claim 21】

The light emitting device of claim 9, wherein the light transmitting member is entirely provided at the outside of the light source.

【Claim 22】

The light emitting device of claim 9, wherein the light transmitting member is partially provided at the outside of the light source.

【Claim 23】

A light emitting device comprising:

a light source emitting excitation light;

a light transmitting member provided in at least one part around the light source; and

a phosphor which is received in the light transmitting member and in which a first phosphor having a light emitting main peak in a range of 500 to 600nm to a blue color light source and a second phosphor having a light emitting main peak in a range of 550 to 600nm to the blue color light source are mixed in a ratio of 9.9 : 0.1 to 5.0 : 5.0.

【Claim 24】

The light emitting device of claim 23, wherein light emitted from the light source and light excited from the phosphor are together emitted.

【Claim 25】

A surface mounting-type light emitting device comprising:

a light source;

a support supporting the light source;

a light transmitting member provided in at least one part around the light source; and

a phosphor which is mixed in the light transmitting member and in which a first phosphor having a chemical formula of $Sr_{4-x}Mg_yBa_zSi_2O_8:Eu_x^{2+}$ ($0 < x < 1$, $0 \le y \le 1$, $0 \le z \le 1$) and a second phosphor having a chemical formula of $Sr_{3-x}SiO_5:Eu^{2+}_x$ ($0 < x \le 1$) are mixed in a fixed ratio.

【Claim 26】

A lamp-type light emitting device comprising:

a light source;

a support supporting the light source;

a light transmitting member provided in at least one part around the light source; and

a phosphor which is mixed in the light transmitting member and in which a first phosphor having a chemical formula of $Sr_{4-x}Mg_yBa_zSi_2O_8:Eu_x^{2+}$ ($0 < x < 1$, $0 \le y \le 1$, $0 \le z \le 1$) and a second phosphor having a chemical formula of $Sr_{3-x}SiO_5:Eu^{2+}_x$ ($0 < x \le 1$) are mixed in a fixed ratio.